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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/987,849	12/09/1997	JOHN V. MCLAIN JR.	COS-97-033	6786

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WORLDCOM, INC.
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EXAMINER
LAO, SUE X

ART UNIT	PAPER NUMBER
2126	15

DATE MAILED: 09/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PP-9

Office Action Summary

Application No.	Applicant(s)
08/987,849	McLain, Jr. et al
Examiner	**Art Unit**
S. Lao	2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Jul 15, 2003* .

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-6 and 14-18* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-6 and 14-18* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

1. Claims 1-6, 14-18 are pending. This action is in response to the amendment filed 7/15/2003. Applicant has amended claims 15-17 and canceled claims 7-13.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. The non-statutory double patenting rejection, whether of the obviousness-type or non-obviousness-type, is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent. *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); and *In re Goodman*, 29 USPQ2d 2010 (Fed. Cir. 1993).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(b) and © may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.78(d).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-6, 14-18 are rejected under the judicially created doctrine of obviousness - type double patenting as being unpatentable over claims 1-23 of U.S. Patent No. 6,295,518 to McLain et al, or over claims 1-18 of U.S. Patent No. 6,256,659 to McLain et al. Although the conflicting claims are not identical, they are not patentably distinct from each other. For example, the first and second command control vectors for first and second input messages of the present application (claims 1, 14, 15) are met by the two or

more command control vectors and for each input message of U.S. Patent No. 6,295,518 (claim 4), first and second current instructions of the present application are met by the one or more instructions of U.S. Patent No. 6,295,518 (claim 4) and instructions for processing the first task of U.S. Patent No. 6,256,659 (claim 1), the single copy of the method object is met by the command response table of U.S. Patent No. 6,295,518 (claim 4) as well as by the virtual object of U.S. Patent No. 6,256,659 (claims 1, 8), processing of the present application (claims 1, 14, 15) is met by processing the input messages of U.S. Patent No. 6,295,518 (claim 4), the script (present claims 4, 18) is met by the script invocation of U.S. Patent No. 6,256,659 (claim 7) as well as by the script file database of U.S. Patent No. 6,295,518 (claim 6), the first/second data object (present claim 5) are met by the data objects of U.S. Patent No. 6,295,518 (claim 9) as well as by the first/second data elements of U.S. Patent No. 6,256,659 (claim 8), the communication like and destination device of the present application (claims 2, 3, 16, 17) are met by the telecommunication network and destination device of U.S. Patent No. 6,295,518 (claims 1, 7), the n/m logical units of instructions (present claim 6) are met by the n/m logical units of computer instructions of U.S. Patent No. 6,256,659 (claims 3, 4) as well as by the n/m logical units of work of U.S. Patent No. 6,295,518 (claim 20).

5. Claims 1-3, 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burgess (U S Pat. 5,652,888) in view of Gamma et al (Design Patterns, Singleton Pattern, pages 127-134).

As to claim 15, Burgess teaches managing computer system resources (target objects), comprising the means' for

generating a first command control vector (message/event) for a first input message (input of integer value), the first command control vector identifying (pointer ptarget) a method object (target object) that contains one or more instructions (target member function) for processing (processes, col. 4, lines 3-19) the first input message (class CIntEvent, col. 8, lines 13-19) [col. 7, line 55 - col. 9, line 21];

generating a second command control vector (message/event) associated with a second input message (input of string value), the second command control vector identifying the same method object (ptarget) identified by the first command control vector, the method object containing one or more instructions (target member function) for processing (processes, col. 4, lines 3-19) the second input message (class CStringEvent, col. 8, lines 19-26) [col. 8, line 46 - col. 11, line 12];

processing (processes, col. 4, lines 3-19) the first and second input messages using the same method object (target object whose class inherits class CEvent, col. 8, lines 5-44).

While Burgess always uses the same method object (target object) to process different messages (prototypes of input such as integer and string, col. 8, lines 5-44), Burgess does not teach providing only a single copy of the method object.

Gamma teaches object creation, including creating a class (singleton) to provide only a single copy of the class object (class having one instance). See page 127-128. Gamma further teaches a typical application of the singleton object creational pattern is to make a window manager into a single copy/instance (page 127, section Motivation). Given the teaching of Gamma, it would have been obvious to provide a single copy of the method object (a window manager) of Burgess. The motivations to combine the teachings of Burgess and Gamma also include the following. Burgess desires to hide different implementations / functional prototypes of the target object from the source object such that each source member function invokes target member functions with the same prototype. Col. 4, lines 31-37. Burgess does not provide a mechanism for calling with the same prototype. Gamma, on the other hand, provides a mechanism for calling a target object with the same prototype (singleton, to permit refined/various/controlled underlying operations and representations). Page 128. Therefore, one of ordinary skill in the art would have been motivated to use the mechanism of Gamma to achieve the hiding in Burgess.

As to claims 16 and 17, Burgess teaches identifying a communication link from which the first input message is received (input port), a destination device for which the message is intended (output port), [col. 4, lines 50-67], identifying the method object

(ptarget), identifying a first current instruction used to process the input message (pmftarget). See col. 8, lines 5-19. Burgess uses this logic to process each message / command control vector including the first and the second. col. 8, lines 5-44. Note the discussion of claim 15 for identifying the same method object.

As to claim 1, Burgess teaches managing computer system resources (target objects), comprising the steps of

generating a first command control vector (message/event) for a first input message (input of integer value), the first command control vector identifying (pointer ptarget) a method object (target object) that contains one or more instructions (target member function) for processing (processes, col. 4, lines 3-19) the first input message (class CIntEvent, col. 8, lines 13-19) [col. 7, line 55 - col. 9, line 21]; identifying the method object (ptarget) in the first command control vector (object message format, col. 8, lines 5-15), identifying in the first command control vector (col.8, line 15) a first current instruction (pmftarget) used to process the first input message (class CIntEvent, col. 8, lines 13-19);

generating a second command control vector (message/event) associated with a second input message (input of string value), the second command control vector identifying the same method object (ptarget) identified by the first command control vector, the method object containing one or more instructions (target member function) for processing (processes, col. 4, lines 3-19) the second input message (class CStringEvent, col. 8, lines 19-26) [col. 8, line 46 - col. 11, line 12]; identifying the method object (ptarget) in the second command control vector (object message format, col. 8, lines 5-15), identifying in the second command control vector (col.8, line 15) a second current instruction (pmftarget) used to process the first input message (class CStringEvent, col. 8, lines 19-26) [ie, typical polymorphism];

processing (processes, col. 4, lines 3-19) the first and second input messages using the same method object (target object whose class inherits class CEvent, col. 8, lines 5-44).

While Burgess always uses the same method object (target object) to process different messages (prototypes of input such as integer and string, col. 8, lines 5-44), Burgess does not teach providing only a single copy of the method object.

Gamma teaches object creation, including creating a class (singleton) to provide only a single copy of the class object (class having one instance). See page 127-128. Gamma further teaches a typical application of the singleton object creational pattern is to make a window manager into a single copy/instance (page 127, section Motivation). Given the teaching of Gamma, it would have been obvious to provide a single copy of the method object (a window manager) of Burgess. The motivations to combine the teachings of Burgess and Gamma also include the following. Burgess desires to hide different implementations / functional prototypes of the target object from the source object such that each source member function invokes target member functions with the same prototype. Col. 4, lines 31-37. Burgess does not provide a mechanism for calling with the same prototype. Gamma, on the other hand, provides a mechanism for calling a target object with the same prototype (singleton, to permit refined/various/controlled underlying operations and representations). Page 128. Therefore, one of ordinary skill in the art would have been motivated to use the mechanism of Gamma to achieve the hiding in Burgess.

As to claims 2 and 3, Burgess teaches identifying a communication link from which the first input message is received (input port), a destination device for which the message is intended (output port), [col. 4, lines 50-67], identifying the method object (ptarget), identifying a first current instruction used to process the input message (pmftarget). See col. 8, lines 5-19. Burgess uses this logic to process each message / command control vector including the first and the second. col. 8, lines 5-44. Note the discussion of claim 15 for identifying the same method object.

As to claim 14, it is a program product claim of claim 1. Note claim 1 for discussion.

6. Claims 4, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burgess in view of Gamma et al as applied to claims 1, 15 and further in view of author admitted prior art APA (page 2, line 25 - page 3, line 20)

As to claims 4, 18, APA teaches a method object invoking a script (page 2, line 29). Given the teaching of APA, it would have been obvious to implement the programming logic of the method object of Burgess with a script. Note discussion of claim 1 for a single copy. The combined teachings would have provided a single copy of a script. The motivations to combine the teachings include the following. Burgess teaches GUI objects which are typically used in a morden windowing environment. To one of ordinary skill in the art, a morden windowing environment is often a multi-tasking system which requires interrupt mechanisms to provide the preemption. Burgess does not provide such a mechanism. APA, on the other hand, provides an interrupt mechanism (timer interrupt) to provide multi-tasking scheduling. Therefore, one of ordinary skill in the art would have been motivated to use the interrupt mechanism of APA to achieve multi-tasking in Burgess.

7. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burgess in view of Gamma et al and APA as applied to claim 4 and further in view of Carr et al ("Compiling Distributed C++").

As to claim 5, Burgess as modified teaches (APA) identifying current script instructions in the first and second command control vectors for processing the first and second input messages, respectively (pointer to identify next instruction to execute within a method object) (APA, page 3, lines 9-14). Note discussion of claim 4 for the method object invoking a script. Burgess as modified does not teach steps (ii) and (iii).

Carr teaches using a data object (value object) to store data generated during execution (return values) of a C++ program (pages 499-500, section 6). Given the teaching of Carr, it would have been obvious to use first/second data objects to store data generated during execution of first/second command control vectors in the C++ implementation of Burgess. It would have been obvious to combine the teachings of Burgess as modified by Gamma and Carr because the former implements the teaching in language C++ (col. 3, lines 16-19) and the latter details one version of the language C++ implementation (section 1). One of ordinary skill in the art would have been motivated to

consider the teaching of Carr before other solutions since this would require less effort in integration.

As to claim 6, APA teaches processing a number n of logical units of instructions for a first type (process one type of instructions); interrupting such processing (timer interrupt); and processing a number m of logical units of instructions for a second type. See page 3, lines 3-8. Given the teaching of APA, it would have been obvious to alternate the processing of the first message / first command control vector and the processing of the second message / second command control vector. Note discussion of claim 4 for a motivation to combine.

8. Applicant's arguments filed 5/17/2003 have been fully considered but they are not persuasive.

Applicant argued that Burgess does not identify in a first command control vector a first current instruction of the method object. (Remarks, page 11, 2nd paragraph - page 13, 1st paragraph). The examiner respectfully disagrees. Burgess identifies a first current instruction of the method object with pointer to target member function pfmtarget, which is part of the first command control vector (object message) shown in col. 8, line 15.

Applicant further argued that Burgess does not identify the same method object and the second current instruction in a second command control vector. (Remarks, page 13, 2nd paragraph - page 14, 1st paragraph). The examiner respectfully disagrees. Burgess identifies the same method object with ptarget and the second current instruction with pfmtarget, which is part of the second command control vector (object message) shown in col. 8, line 15. It is noted that Burgess is based on C++, an object-oriented development and run-time system, wherein polymorphism provides the same invocation format (command control vectors) for different data types (inputs) while an appropriate implementation of a target member function receives and processes the corresponding data type. In other words, invocations of a target member function for integers and strings uses the same format (col. 8, lines 4-15) while member functions of classes CIntEvent and CStringEvent (col.8, lines 19-44) handle integers and strings, respectively.

Regarding the argued motivation to combine the teachings of Burgess and Gamma (page 14-16), a motivation based on the teachings of Burgess and Gamma are provided. See rejection of claim 15 for detail.

Regarding the argued communication links and destination (page 16), these are met by the input and output ports identified by the respective pointers. See Burgess, col. 4, lines 50-67.

Regarding applicant's arguments concerning claim 15 (pages 17-19), note the discussion of claim 1.

Regarding Carr, applicant argued that Carr does not teach data objects as claimed (pages 20-21) and the motivation to combine. The examiner's response is that it is the combined teachings of Burgess, Gamma and Carr, instead of Carr alone, that meets the claimed data objects.

Regarding the argued features of the admitted prior art relied on, ie, script and m/n instructions (pages 22-23), it is the combined teaching including the admitted prior art, instead of the prior art alone, that meets the claimed script and m/n instructions. See discussions of claims 4 and 6 for detail.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sue Lao whose telephone number is (703) 305-9657. A voice mail service is also available at this number. The examiner's supervisor, SPE Alvin Oberley, can be reached on (703) 305 9716. The examiner can normally be reached on Monday - Friday, from 9AM to 5PM. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7238 for After Final communications, (703) 746-7239 for Official communications and (703) 746-7240 for Non-Official/Draft communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.

Sue Lao Sue Lao
September 20, 2003